

Appl. No. 10/065,960  
Docket No. 125517 / GEM-0071

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No.:	10/065,960	:	Confirmation No.:	2536
Applicant:	GOPAL B. AVINASH, et al.	:	Group Art Unit:	3737
Filed:	December 4, 2002	:	Examiner:	William C. Jung
Docket No.:	125517 / GEM-0071	:		

For: METHOD AND SYSTEM USING A NON-ELECTRICAL SENSOR FOR  
GATING

April 12, 2006

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

In response to the Final Action dated October 25, 2005, and the Advisory Action dated April 7, 12006, Applicant hereby requests review of the Final Rejection in the above-identified application. No amendments are being filed with this request. This request is being filed concurrently with a Notice of Appeal. This review is requested for the reason(s) stated on the attached sheet(s), which do not exceed more than five (5) pages.

This response is accompanied by a request for an extension of time under 37 CFR 1.136(a).

Reasons begin on page 2.

**CERTIFICATE OF MAILING OR TRANSMISSION**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope, addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, at the United States Patent and Trademark Office, on the date shown below.

Kim Lawrence  
Name

Signature

Date

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### REASONS

#### Regarding Independent Claims 1, 16 and 21

The claim limitations at issue are directed to:

"selecting a non-electric sensor, the non-electric sensor being *an acceleration sensor*; and, *utilizing the non-electric sensor* to acquire information *for gating*."

(Emphasis added) (Claim 1);

"selecting a non-electric sensor, the non-electric sensor being *a force sensor*; and, *utilizing the non-electric sensor* to acquire information *for gating*." (Emphasis added)

(Claim 16); and

"a non-electrical sensor from a group consisting of *an accelerometer, force sensor, ultrasonic sensor, strain gage, photodiode, and an interferometer resting on a vibrating surface*; and,

*a patient-sensor interface* having a first end and a second end, the first end *adapted for securing to a patient*, the second end *coupled to the sensor*." (Emphasis added) (Claim 21).

Dependent claims inherit all of the limitations of the respective parent claim.

The Examiner alleges that Sontag et al. anticipates the claimed invention under 35 U.S.C. 102(b). Final Action Paper No. 01102005, pages 2-3.

Applicant respectfully disagrees that Sontag discloses *each and every element of the claimed invention arranged as claimed*. Applicant's paper "Amendment Under 37 CFR 1.116", dated December 21, 2005, pages 7-12.

In alleging anticipation, the Examiner states that Sontag discloses the claimed invention by disclosing "where the measurement of the respiratory cycle is based on *displacement (acceleration sensor)* and *pressure (force sensor)*" and cites Sontag at (col. 2, lines 47-63; col. 4, lines 25-42; col. 5, line 11 – col. 6, line 6). Final Action Paper No. 01102005, page 3.

Here, the Examiner equates *displacement* with *acceleration*, and *pressure* with *force*.

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Applicant respectfully submits that a displacement sensor provides a signal representative of displacement, not acceleration per se, and that a pressure sensor provides a signal representative of pressure, not force per se. Additionally, Applicant submits that the use of a displacement sensor or a pressure sensor for measurement of the respiratory cycle is not the same as utilizing an acceleration sensor or a force sensor to acquire information for gating.

In view of the foregoing, Applicant respectfully submits that for an anticipation rejection to stand, *each and every element of the claimed invention arranged as claimed must be disclosed in a single prior art reference*, and by failing to meet this burden, the Examiner has clearly improperly rejected the claims by demonstrating clear error based upon a legal or factual deficiency.

**Regarding Independent Claims 10, 18, 25 and 37**

Independent Claims 10, 18, 25 and 37 include the limitation "accelerometer". As such, the limitations at issue are directed to *an accelerometer arranged as claimed*.

Applicant argued that the amendments to Claims 10, 18, 25 and 37 should be allowable in view of Sontag because Sontag lacks anticipatory disclosure of *each and every element of the claimed invention arranged as claimed*. Applicant's paper "Amendment Under 37 CFR 1.116", dated December 21, 2005, pages 15-16.

In the Advisory Action dated February 8, 2006, Paper No. 02022006, page 2, and the Advisory Action dated April 7, 2006, Paper No. 21032006, page 2, the Examiner fails to identify where Sontag specifically discloses each and every element of the claimed invention arranged as claimed.

While Applicant acknowledges that Sontag discloses a linear accelerometer 3 that can be triggered (col. 5, lines 16-19), Applicant finds Sontag to be completely void of disclosing the utilization of a non-electric accelerometer to acquire information for cardiac gating, which is specifically claimed for in the instant invention, and submits that the Examiner has clearly not met the burden of showing where Sontag specifically does disclose each and every element of the claimed invention arranged as claimed.

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In view of the amendment, Applicant respectfully submits that the Examiner has not properly demonstrated anticipation under 35 U.S.C. §102(b), as the Examiner has not demonstrated where *each and every element of the claimed invention arranged as claimed has been disclosed in a single prior art reference.*

Accordingly, Applicant submits that the Examiner has clearly improperly rejected the claims by demonstrating clear error based upon a legal or factual deficiency.

**Regarding Independent Claims 10 and 18 More Specifically**

In alleging anticipation of Claims 10 and 18, the Examiner remarks that "the element strain gauge is well known in the art to measure stress, pressure or force on a sensor, therefore, strain gauge is *a functional equivalent* of pressure or force sensor." Final Action Paper No. 01102005, page 3 (emphasis added).

Applicant respectfully submits that a rejection based on *a functional equivalent* is absolutely contrary to the requirements of anticipation under 35 U.S.C. §102(b), which requires that each and every element of the claimed invention arranged as claimed be disclosed in a single prior art reference, and by failing to meet such a burden, the Examiner has clearly improperly rejected the claims by demonstrating clear error based upon a legal or factual deficiency.

**Regarding Dependent Claims 19, 20, 31 and 33**

Claims 19, 20, 31 and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sontag as applied to Claims 1, 18, 25 and 32, and further in view of Arcelus. Final Action Paper No. 01102005, page 4.

In view of Claims 19, 20, 31 and 33 being dependent claims, and in view of Applicant's remarks above regarding the Examiner's demonstration of clear error with respect to the respective parent claims, Applicant respectfully submits that Claims 19, 20, 31 and 33 are directed to allowable subject matter.

In light of the forgoing, as well as remarks made in prior responses, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §102(b) fall wholly short of properly establishing a prima facie case of anticipation, that the Examiner has

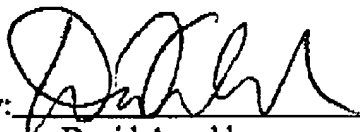
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clearly improperly rejected the claims by demonstrating clear error based upon a legal or factual deficiency. Accordingly, withdrawal of all rejections and notice of allowance of the claims is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees that may be required for this submission, or credit any overpayment, to Deposit Account No. 07-0845.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above identified Deposit Account.

Respectfully submitted,  
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Applicant's Attorneys

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